Applicant: Hongyong Zhang Attorney's Docket No.: 07977-088002 / US3155D1

Serial No.: 09/362,808 Filed: July 28, 1999 Page: 2 of 4

the other has the recited taper angle  $\alpha$ . In addition, as discussed at the interview, the Examiner's view is that claim 14 does not presently include language that prevents the claim from reading on the arrangement of Lin. Applicant respectfully disagrees.

For the Examiner's convenience, claim 14 is set forth below:

14. (Previously Presented) A semiconductor device comprising:

a semiconductor layer formed over a substrate having an insulating surface and including at least channel, source and drain regions;

an insulating film on said semiconductor layer;

a gate electrode over the insulating film;

at least a first interlayer insulating film over the insulating film and over the gate electrode, and a second interlayer insulating film over the first interlayer insulating film;

at least one contact hole in said first and second interlayer insulating films and said insulating film, said contact hole having a tapered section; and

an electrode formed on said contact hole and connected with one of said source and drain regions through said contact hole,

wherein a taper angle  $\beta$  of an inner surface of the second interlayer insulating film in the contact hole with respect to a major surface of said semiconductor layer is larger than a taper angle  $\alpha$  of an inner surface of the first interlayer insulating film in the contact hole with respect to said major surface of said semiconductor layer.

Thus, claim 14 requires the second interlayer insulating film to be over the first interlayer insulating film, and further requires the first interlayer insulating film to be over the insulating film and the gate electrode (which, in turn, are over the semiconductor layer formed over the substrate). Thus, according to claim 14, the first interlayer insulating film (which has the smaller taper angle) is between the substrate and the second interlayer insulating film (which has the larger taper angle).

With reference to Fig. 6 of Lin, if the layer 16 of Lin is said to correspond to the recited first interlayer insulating film, the layer 18 could not qualify as the second interlayer insulating film because the layers 16 and 18 have the same taper angle. Nor could either of the layers 20 and 22 qualify, since both of these layers have a smaller taper angle than layer 16, which is located between these layers and the substrate, while the claim requires a larger taper angle.

If the layer 18 of Lin is said to correspond to the recited first interlayer insulating film, the layer 16 could not qualify as the second interlayer insulating film because the layer 18 is not between the layer 16 and the substrate, and because the layers 16 and 18 have the same taper angle. Nor could either of the layers 20 and 22 qualify, since both of these layers have a smaller

Applicant: Hongyong Zhang Attorney's Docket No.: 07977-088002 / US3155D1

Serial No.: 09/362,808 Filed: July 28, 1999 Page: 3 of 4

taper angle than the layer 18, which is located between these layers and the substrate, while the claim requires a larger taper angle.

If the layer 20 of Lin is said to correspond to the recited first interlayer insulating film, neither of the layers 16 and 18 could qualify as the second interlayer insulating film because claim 20 is not between either of the layers 16 and 18 and the substrate. The layer 22 also could not qualify as the second interlayer insulating film because the layers 20 and 22 have the same taper angle.

If the layer 22 of Lin is said to correspond to the recited first interlayer insulating film, none of the layers 16, 18 and 20 could qualify as the second interlayer insulating film because the layer 22 is not between any of the layers 16, 18 and 20 and the substrate.

Accordingly, since no possible combination of the layers 16-20 of Lin satisfy the relationship set forth in claim 14, Lin does not satisfy this relationship and the rejection of claim 14 and its dependent claims should be withdrawn.

Like claim 14, each of independent claims 19, 44 and 47 recites an arrangement in which a first insulating film (which has the smaller taper angle) is between a substrate and a second insulating film (which has the larger taper angle). Accordingly the rejection of claims 19, 44 and 47, along with their dependent claims, should be withdrawn for the reasons discussed above with respect to claim 14.

Claim 24 recites a semiconductor device that includes, among other features, a semiconductor layer formed over a substrate having an insulating surface and having a channel region, at least one low doped impurity region, and at least one high doped impurity region that is adjacent to the channel region with the low doped impurity region interposed therebetween. As best understood, the rejection asserts that Fig. 2e of Sasaki shows this feature with the regions 15, 16 being the low doped impurity regions and the regions 15', 16' being the high doped impurity regions, and the region between the regions 15, 16 being the channel region. However, in Sasaki, the regions 15, 16, 15' and 16' are formed in the substrate 11. As such, Sasaki does not describe or suggest the semiconductor layer recited in claim 24. Nor does there appear to be any motivation to combine Fu, Sasaki and Lin to somehow arrive at this feature. Accordingly, the rejection of claim 24 and its dependent claims should be withdrawn.

Applicant submits that all claims are in condition for allowance.

Applicant: Hongyong Zhang Attorney's Docket No.: 07977-088002 / US3155D1

Serial No. : 09/362,808 Filed : July 28, 1999

Page : 4 of 4

The fee in the amount of \$450 in payment of the two-month extension fee is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date:\_\_\_\_\_\_10/4/06\_\_\_\_\_

John F. Hayden Reg. No. 37,640

Fish & Richardson P.C. 1425 K Street, N.W. 11th Floor

Washington, DC 20005-3500 Telephone: (202) 783-5070 Facsimile: (202) 783-2331

40370699.doc